

### **REMARKS**

This communication responds to the Office Action mailed January 31, 2007. The informalities in the drawings and specification objected to in paragraphs 2-4 of the Office Action have been corrected.

Claims 1, 2, 5, 7 and 9 have been canceled. Claims 4, 6 and 8 have been amended in accordance with the Examiner's suggestions in paragraph 5 of the Office Action. Claim 3 has been amended to change the word "is" after the word "characteristics" to "are." Applicant believes that these amendments to claims 3, 4, 6 and 8 do not narrow the scope of these claims. Applicant believes the Examiner's objection to claim 3 to add the word "and" after the word "equalizing" on line 7 would unnecessarily limit the scope of claim 3, and render claim 10 superfluous. Therefore, Applicant has not incorporated this suggestion and respectfully requests that the Examiner withdraw this objection.

In paragraph 8 of the Office Action, claims 3, 4, 6 and 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,796,814 to Brajal et al. (Brajal) in view of Applicant's admitted prior art (APAA) and in further view of U.S. Patent No. 5,909,465 to Bottomley et al. (Bottomley). Applicant respectfully traverses this rejection.

As admitted in the Office Action, Brajal does not teach demodulating independently each of the modulated signals and combining the demodulation results, thereby generating a conventional output as required by independent claim 3. Furthermore, as admitted in the Office Action, Brajal does not teach a second receiving unit comprising of demodulation unit that demodulates independently each of the modulated signals and combines the demodulation results as required by each of the

independent claims 6 and 8. In order to cure this deficiency in Brajal, the Office Action has combined the teachings of Brajal and AAPA.

As further admitted in the Office Action, the combination of Brajal in view of AAPA does not teach selecting an output with higher communication quality from the equalized, demodulated output and the conventional output as required by claim 3, and the combination does not teach a selection unit for selecting an output with higher communication quality from the outputs of the first and second receiving units as required by each of independent claims 6 and 8. In order to cure these deficiencies in the combination, the Office Action has combined the teachings of the combination with Bottomley.

Applicant respectfully submits that the Office Action has failed to make a *prima facie* case of obviousness because an improper motivation to combine these references has been cited. Furthermore, Applicant respectfully submits that Bottomley does not concern a down channel in a CDMA cellular system, and thus could not be properly combined with the combination of Brajal and AAPA.

A *prima facie* case of obviousness requires, among other things, that a motivation be identified, in the prior art itself, that would have caused one of skill in the art to make any proposed modification of the primary references or to combine references. With reference to independent claims 3, 6 and 8, the Office Action stated that it would have been obvious to combine Brajal with AAPA to provide improved signal equalization in a CDMA environment. Applicant respectfully disagrees that the prior art contains such a motivation or suggestion. The Office Action took the position that it would have been obvious to include the RAKE receiver teachings of AAPA with the equalization teachings of Brajal “in order to prove improve signal equalization in a

CDMA environment,” without citing to either reference as providing this purported motivation to combine.

The fact that the advantageous features of the Applicant’s invention improves down link reception in a CDMA environment is not evidence that it would have been obvious to combine two different references to capitalize on a superior performance of each. On the contrary, the fact that the prior art has no teaching or suggestion of a feature, combined with the fact that the features particular advantageous, is evidence of non-obviousness, not it’s opposite. If the rule in the Office Action were followed, then the most advantageous inventions would be the most obvious. Of course this is not true. Thus, the motivation for combining Brajal with AAPA is insufficient, and for at least this reason no *prima facie* case of obviousness has been established.

The only motivation for adding a RAKE receiver to Brajal’s system is the motivation to meet this feature of the claim, which is, of course, improper, and in fact amounts to a hindsight reconstruction of the claim. It was the Applicant that determined a RAKE receiver would perform superior to an equalizer when there were few mobile units, and that equalization would perform superior when there were many mobile units. Both references are completely silent with respect to utilizing both demodulation techniques, and this fact completely undercuts the Office Action’s purported motivation to combine them.

Further, as admitted in paragraph 7 of the Office Action, “Brajal does not explicitly teach the equalization of spread spectrum signals based on the frequency response of a plurality of radio channels in a CDMA environment.” This admission shows that the combination of Brajal with AAPA is insufficient to cover all the claim elements.

In view of the failure of the Office Action to provide any legally acceptable motivation for the recited first combination, and the deficiency of the first combination, no *prima facie* case of obviousness has been set forth with regard to claims 3, 6 and 8. Accordingly, claims 3, 6 and 8 are believed to be patentable over the cited art and withdrawal of the rejection against all the remaining claims on this basis of the combination of Brajal and AAPA is respectfully requested.

The aforementioned analysis is also directly applicable to the combination of Brajal and AAPA (the first combination) with Bottomley. At the outset, Bottomley fails to disclose selecting between two methods of demodulation in a CDMA down link channel. Bottomley teaches a method of bidirectional demodulation of Viterbi turbo codes, where forward or reverse demodulation is selected based on a higher demodulation quality value. See Bottomley col. 5, lines 37-61. Bottomley does not concern reception in the CDMA context, and even if Bottomley taught selecting between an equalizer and a RAKE receiver, it could not be properly combined with the first combination because it concerns a different field. For this additional reason, no *prima facie* case of obviousness has been set forth with regards to independent claims 3, 6 and 8. Accordingly, claims 3, 6 and 8 are believed patentable over the cited art.

Claims 4 and 10 depend from claim 3 and include all the limitations found therein, and are also allowable for at least the same reason stated in connection with claim 3 above. These claims include further limitations which, in combination with the limitations of claim 3, are neither disclosed nor suggested in the prior art of record.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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